

OSA - 3145-64

File "I"
Camera

25 June 1964

Dear Jack,

Enclosed with this letter are graphs of a portion of Mission FT-129 showing vehicle gyrations as determined by measurements of stationary targets on successive frames in both FWD and AFT cameras. Two other missions identified as GT-121 and GT-130 were also received but were of little value because of excessive cloud cover or insufficient overlap or both. The driver of the vehicle flying Mission GT-130 made several passes over the target array at EAFB but the passes were transverse to the array instead of parallel to them as had been originally requested.

As in the previous mission which we analyzed, measurements from the forward edge of the frame to a stationary target near the center edge of the frame were measured with a millimeter scale. This was also done with the same target in the next succeeding frame in order to determine how far it had moved, and at the same time the position of a new target was measured in the succeeding frame. This was continued for as long as the vehicle was on a straight course, and the differences between the positions of the targets, as measured from the forward edge, were plotted. This gave information regarding pitch.

Information regarding roll was obtained in a similar manner, by measuring the distance of the same targets with a millimeter scale from the left edge of successive frames. Differences in position of the targets with respect to the left edge were then plotted.

If you will superimpose the plots of the FWD Camera over the AFT, aligning the frame numbers, you will notice an excellent correlation, which is, of course, to be expected. It might be well to note that vehicle roll was substantially less in this mission than in previous ones measured.

25 YEAR RE-REVIEW

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Since this vehicle flew no course parallel with the target array it was not possible to determine directly frame by frame variations in yaw, if such existed. However, the overall yaw, or perhaps it would be better to call it departure of the bearing of the vehicle from its true course amounted to $1^{\circ}35'$, which was probably due to crosswind.

Average forward motion of the vehicle as measured on the film was 38.5 millimeters, amounting to a 30% overlap. Overlaps varied to a maximum of 65.4% and a minimum of 0%.

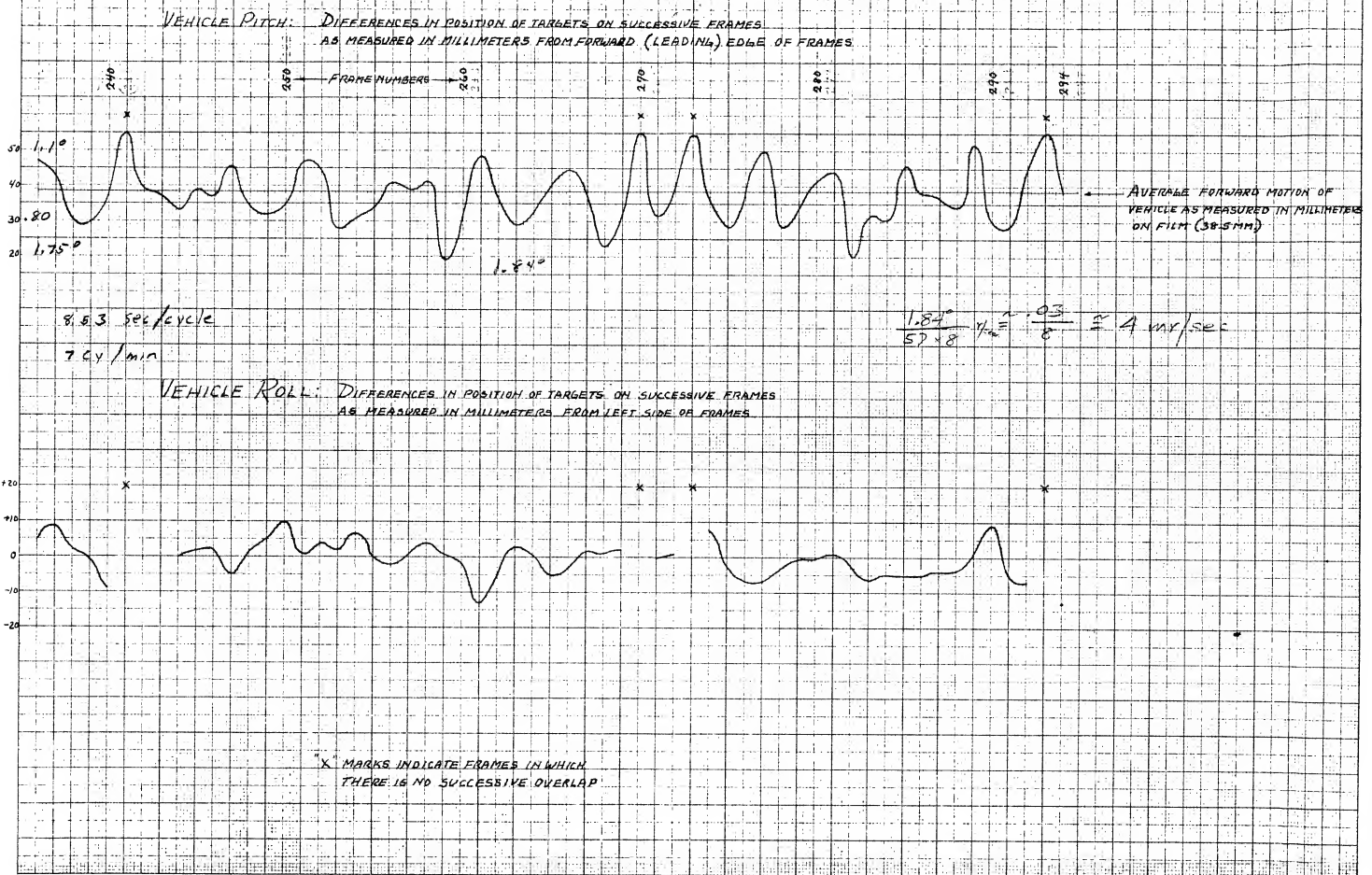
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Encl.



BES 6640

GT-129 AFT CAMERA



GT-129 FWD CAMERA

